```
? S PN=EP 481311
               1 PN=EP 481311
      84
? t \frac{4}{3}, ab/1
 4/3,AB/1
DIALOG(R) File 351: Derwent WPI
(c) 2005 Thomson Derwent. All rts. reserv.
009006340
WPI Acc No: 1992-133640/*199217*
XRAM Acc No: C92-062493
  New peptide(s) as HIV-1 protease and renin inhibitors - for treating
  hypertension, hyperaldosteronism, AIDS and as diagnostic agents
Patent Assignee: MERCK PATENT GMBH (MERE )
Inventor: DORSCH D; RADDATZ P; SCHMITGES C J; SCHMITGES C
Number of Countries: 020 Number of Patents: 009
Patent Family:
Patent No
              Kind
                     Date
                             Applicat No
                                             Kind
                                                    Date
                                                             Week
                   19920422 EP 91117014
                                                  19911005
                                                            199217
EP 481311
               A
                                              Α
                             DE 4033062
                                                  19901018
                                                            199218
DE 4033062
               Α
                   19920423
                                              Α
AU 9185877
                            AU 9185877
                                                  19911015
                                                            199226
               Α
                   19920430
                                              Α
                   19920419
                             CA 2053573
                                              Α
                                                  19911016
                                                            199228
CA 2053573
               Α
                   19920729
                             ZA 918294
                                                  19911017
                                                            199236
ZA 9108294
               A
                                              Α
                            PT 99262
                                                  19911017
                                                            199239
PT 99262
               Α
                   19920831
                                              Α
CS 9103164
               A2
                  19920513 CS 913164
                                              Α
                                                  19911018
                                                            199247
                   19921106 JP 91333849
                                              A
                                                  19911018
                                                            199251
JP 4316548
               Α
               A3 19921119 EP 91117014
                                              Α
                                                  19911005
                                                            199342
EP 481311
Priority Applications (No Type Date): DE 4033062 A 19901018
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                      Filing Notes
EP 481311
              A G 16
   Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU NL SE
DE 4033062
                    15
ZA 9108294
              Α
                    41 C07K-000/00
                    19 C07C-237/22
JP 4316548
              A
AU 9185877
              Α
                       C07D-239/26
                       C07K-007/00
CA 2053573
              A
PT 99262
                       C07K-005/00
              Α
CS 9103164
                       C07K-005/02
              A2
```

## Abstract (Basic): EP 481311 A

Amino acid derivs. of formula (I) and their salts are new. X= H, RO-O-CmH2mCO-, R9-CmH2m-OCO, R9-CmH2mCO, R9SO2, R1OR11N-CmH2mCO, R12NH-C(=NH)-NH-CmH2mCO, R10OOC-CmH2mCO, R10-O3S-CmH2mCO, R100(CH2CH2O)rCMH2mCO or A3N+-CmH2m-CO-An-; W= O or NH; R1, R2, R7, R8 and R9= H, A, Ar, Ar-alk, Het, Het-alk, or (opt. substd. by 1 or more A, AO and/or Hal) 3-7C cycloalkyl, 4-11C cycloalkylalkyl, 7-14C bi- or tri-cycloalkyl or 8-18C bi- or tri-cycloalkylalkyl; R3= (H, OH), (H, NH2) or oxo; R4, R5, R10 and R11= H or A; R10R11N can also be pyrrolidino, piperidino, morpholino or piperazino (opt. substd.; R6= Ar-alk or 4-11C cycloalkylalkyl; R12= H, A, Ar-alk or CN; A= 2 or 3; m and x= 0-10; n, p and r= 0-3; Ar= phenyl (opt. substd.). Het= satd. or unsatd. 5-6 membered heterocycle with 1-4 N, O and/or S atoms, opt. fused to benzo, and/or substd. by 1 or more of A, OA, Hal, CF3, OH, NO2, OXO, NH2, NHA, NA2, etc., and/or having the N and/or S heteroatoms oxidised; Hal= F, Cl, Br or iodo; Ac= ACO, ArCO, Ar-alk-CO or ANHCO;

An-= anion (which may be absent if a carboxylic gp. in the molecule is present in anionic form); alk= 1-8C alkylene; A= 1-8C alkyl; one or more NHCO gps. in (I) can be replaced by NACO.

USE/ADVANTAGE - (I) inhibit plasma renin and HIV-protease and are useful for treating and preventing renin-dependent hypertension, cardiac insufficiently and hyperaldosteronism or retroviral diseases, esp. AIDS. They are very selective with little effect on other aspartyl proteases. The pref. daily dose is 1-10 mg/kg, esp. given parenterally. (I) can also be used diagnostically, esp. at 0.1-10 mg/kg.

• ;:•



- (1) Veröffentlichungsnummer:
- 11) Publication number:
- Numéro de publication:

0 420 913

Internationale Anmeldung veröffentlicht durch die Weltorganisation für geistiges Eigentum unter der Nummer:

WO 89/12458 (art.158 des EPÜ).

International application published by the World Intellectual Property Organisation under number:

WO 89/12458 (art.158 of the EPC).

Demande internationale publiée par l'Organisation

Mondiale de la Propriété Intellectuelle sous le numéro:

WO 89/12458 (art.158 de la CBE).

```
? 8 PN=EP 481311
               1 PN=EP 481311
      84
? t 4/3, ab/1
 4/3,AB/1
DIALOG(R) File 351: Derwent WPI
(c) 2005 Thomson Derwent. All rts. reserv.
009006340
WPI Acc No: 1992-133640/*199217*
XRAM Acc No: C92-062493
 New peptide(s) as HIV-1 protease and renin inhibitors - for treating
 hypertension, hyperaldosteronism, AIDS and as diagnostic agents
Patent Assignee: MERCK PATENT GMBH (MERE )
Inventor: DORSCH D; RADDATZ P; SCHMITGES C J; SCHMITGES C
Number of Countries: 020 Number of Patents: 009
Patent Family:
                             Applicat No
Patent No
              Kind
                     Date
                                            Kind
                                                   Date
                   19920422 EP 91117014
                                                 19911005
                                                           199217 B
EP 481311
               A
                                             A
DE 4033062
                   19920423 DE 4033062
                                             Α
                                                 19901018
                                                           199218
               Α
                   19920430 AU 9185877
                                                 19911015
                                                           199226
AU 9185877
                                             Α
               Α
                   19920419 CA 2053573
                                                 19911016
                                                           199228
CA 2053573
                                             A
               Α
ZA 9108294
                   19920729 ZA 918294
                                                 19911017
                                                           199236
                                             Α
               A
                   19920831 PT 99262
PT 99262
                                                 19911017
                                                           199239
               Α
                                             Α
                   19920513 CS 913164
CS 9103164
               A2
                                             Α
                                                 19911018
                                                           199247
JP 4316548
               Α
                   19921106
                             JP 91333849
                                             Α
                                                 19911018
                                                           199251
               A3 19921119 EP 91117014
                                             Α
                                                 19911005
                                                           199342
EP 481311
Priority Applications (No Type Date): DE 4033062 A 19901018
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                     Filing Notes
EP 481311
              A G 16
   Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU NL SE
DE 4033062
                   15
            Α
ZA 9108294
              A
                    41 C07K-000/00
JP 4316548
                    19 C07C-237/22
              A
                       C07D-239/26
AU 9185877
              Α
CA 2053573
              Α
                       C07K-007/00
                       C07K-005/00
PT 99262
CS 9103164
              A2
                       C07K-005/02
Abstract (Basic): EP 481311 A
        Amino acid derivs. of formula (I) and their salts are new. X= H,
```

Amino acid derivs. of formula (I) and their salts are new. X= H, RO-O-CmH2mCO-, R9-CmH2m-OCO, R9-CmH2mCO, R9SO2, R10R11N-CmH2mCO, R12NH-C(=NH)-NH-CmH2mCO, R10OOC-CmH2mCO, R10-O3S-CmH2mCO, R10O(CH2CH2O)rCMH2mCO or A3N+-CmH2m-CO-An-; W= O or NH; R1, R2, R7, R8 and R9= H, A, Ar, Ar-alk, Het, Het-alk, or (opt. substd. by 1 or more A, AO and/or Hal) 3-7C cycloalkyl, 4-11C cycloalkylalkyl, 7-14C bi- or tri-cycloalkyl or 8-18C bi- or tri-cycloalkylalkyl; R3= (H, OH), (H, NH2) or oxo; R4, R5, R10 and R11= H or A; R10R11N can also be pyrrolidino, piperidino, morpholino or piperazino (opt. substd.; R6= Ar-alk or 4-11C cycloalkylalkyl; R12= H, A, Ar-alk or CN; A= 2 or 3; m and x= 0-10; n, p and r= 0-3; Ar= phenyl (opt. substd.). Het= satd. or unsatd. 5-6 membered heterocycle with 1-4 N, O and/or S atoms, opt. fused to benzo, and/or substd. by 1 or more of A, OA, Hal, CF3, OH, NO2, OXO, NH2, NHA, NA2, etc., and/or having the N and/or S heteroatoms oxidised; Hal= F, C1, Br or iodo; Ac= ACO, ArCO, Ar-alk-CO or ANHCO;

An-= anion (which may be absent if a carboxylic gp. in the molecule is present in anionic form); alk= 1-8C alkylene; A= 1-8C alkyl; one or more NHCO gps. in (I) can be replaced by NACO.

USE/ADVANTAGE - (I) inhibit plasma renin and HIV-protease and are useful for treating and preventing renin-dependent hypertension, cardiac insufficiently and hyperaldosteronism or retroviral diseases, esp. AIDS. They are very selective with little effect on other aspartyl proteases. The pref. daily dose is 1-10 mg/kg, esp. given parenterally. (I) can also be used diagnostically, esp. at 0.1-10 mg/kg.